

Remark

Applicants respectfully request reconsideration of this application as amended. No Claims have been amended. Claim 10 has previously been cancelled. Therefore, claims 1-9 and 11-22 remain present for examination.

35 U.S.C. §103 Rejection

Kaiser, Boariu and Buehrer

The Examiner has rejected claims 1-9 and 11-22 under 35 U.S.C. §103 (a) as being unpatentable over Stefan Kaiser, (Spatial Transmit Diversity Techniques for Broadband OFDM System) (“Kaiser”), in view of Boariu et al., U.S. Patent No. 6,865,237 (“Boariu”), and in further view of Buehrer et al., U.S. Patent Application Publication 2003/0081656 (“Buehrer”). For Kaiser, the new reference, the Examiner cites specifically to the first two pages of the article and in particular to Figure 1 and the section on Subcarrier Diversity. This is the introduction and in the introduction, Kaiser sets forth some conventional variations of OFDM. As a result, Kaiser adds nothing to the first two references as OFDM is already described in Buehrer.

Turning specifically to the citations of the Examiner, Kaiser states first that “each block is transmitted over a [or one] separate antenna.” Kaiser also states that “each of the M OFDM blocks maps its N_c/M data symbols on its assigned set of subcarriers.” N_c represents the total number of data symbols and M is the number of blocks and the number of antennas.

Therefore, there is no “at least partially redundantly transmit” in Kaiser. There is also no “each of the sub-carriers is to be transmitted over an array of N antennas.”

Instead each block is transmitted on a separate antenna.

To provide “transmitted over an array” and “a complex weight for each antenna path,” the Examiner has turned back to Buehrer. As explained previously, Buehrer clearly shows that each of the M transmit antennas each send their own signal. The different antennas provide diversity only in that their spatial locations are different. The Examiner refers to paragraph 91, but this describes the signal for only one antenna. There is no suggestion that anything is done to get the antennas to operate together to send a single signal.

The current rejection fails to provide several elements of the claims. Taking Claim 1 as an example, these include as indicated in bold:

“splitting the data signal into a plurality of sub-carriers **to at least partially redundantly** transmit the information;”

“each of the sub-carriers is to be transmitted over **an array of N antennas** using a **different antenna path for each signal** [into which the sub-carriers are split]”;

“the sets of complex weights having a **complex weight for each antenna path**;”

“the set of complex weights used to modify each of the sub-carriers includes **different weights for each antenna path** of the array.”

Absent these teachings in the reference, the rejection is, respectfully, traversed.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the remark, and that the claims as amended are now in condition for allowance.

Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
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